AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 1, line 6, as follows:

A common problem in biochemical reactions, in particular miniaturised biochemical reactions is controlling the temperature. Invasive temperature probes add to the thermal mass of the sample and increase time constraints associated with heating and cooling. A particular example where such a problem occurs is with minaturised amplification reactions such as the PCR reaction. In this reaction, cycling between various accurate temperatures is an essential element. In outline, the procedure consists of the following steps, repeated cyclically. Denaturation: A mixture containing the PCR reagents (including the DNA to be copied, the individual nucleotide bases (A,T,G,C), suitable primers and ~~Dolymerase~~Polymerase enzyme) are heated to a predetermined temperature to separate the two strands of the target DNA.

Please amend the paragraph beginning at page 4, line 6, as follows:

On denaturation however, the opposed end regions of the sequence separate so that the reporter and quencher molecules become spaced and so FRET no ~~linger~~longer occurs. This changes the signals from the respective molecules and so this event can be detected.

Please amend the paragraph beginning at page 4, line 12, as follows:

Another arrangement is illustrated in Figure 3. In this case, the reporter (4) and quencher molecules (5) are located on different strands (6, 7 respectively) of a DNA temperature probe sequence and are located such that on hybridisation of the strands, they are brought into close proximity to each other so that ~~RET~~FRET can occur.

Please amend the paragraph beginning at page 4, line 19, as follows:

Yet a further embodiment is illustrated in Figure 4. In this case, an intercalating dye (2) is used as an element of the ~~MET~~FRET system. A quencher molecule(5) which can absorb

radiation from the dye may be arranged on a strand of the temperature probe sequence such that it can absorb radiation from dye which is close proximity to on hybridization of the strands. When the temperature probe sequence reaches a temperature at which it is denatured, the dye (2) is dispersed and so the signal from the quencher molecule (5) changes.

Please amend the paragraph beginning at page 5, line 11, as follows:

The temperature probe sequence of the invention may be designed so that it denatures at any desired predetermined temperature. For example, the denaturation temperature of a sequence depends to some extent on its length. Longer sequences will denature or melt at higher temperatures. Furthermore, it is known that the bases C and G bind together more strongly than A and T. Therefore, the greater the higher the content of the bases G and C contained within a sequence, the higher the melting point of the sequence will be. This feature is illustrated in Figure ~~5~~7 which shows the melting temperature of a DNA sequence plotted against the percentage of and GC base pairs which are present within in. Thus, by adjusting the GC content, the temperature probe sequence may be designed so that, if desired, it also has a predetermined length.